

# PATENT ABSTRACTS OF JAPAN

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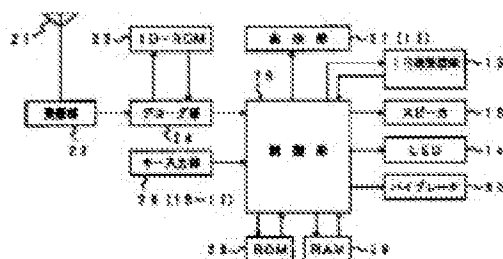
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## (54) TRANSMITTER

### (57)Abstract:

PURPOSE: To surely and easily send data corresponding to a time such as schedule data even to an opposite party at a remote location.

CONSTITUTION: The transmitter is provided with a RAM 29 storing a designated code string in cross reference with time, a clock section (register) provided in the inside of the RAM 29 and a control section 25 which discriminates it when a time obtained by the clock section is coincident with a time stored in the RAM 29 and reads the designated code string stored corresponding to the time when the coincidence is discriminated from the RAM 29 and allows a speaker 18 to sound an output.



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## CLAIMS

[Claim(s)]

[Claim 1]A sending set comprising:

A memory measure which makes a designation code sequence correspond with time, and memorizes

it.

a time check --- a means.

this time check --- a decision means which judges this when time obtained from a means is in agreement with time memorized by the above-mentioned memory measure.

A transmitting means which reads and carries out the transmission output of the designation code sequence memorized by this decision means corresponding to time which judged coincidence from the above-mentioned memory measure.

[Claim 2]A switching means which carries out instructing operation of the transmission output of a designation code sequence by the above-mentioned transmitting means is provided further, The sending set according to claim 1 carrying out the transmission output of the above-mentioned transmitting means when instructing operation according a designation code sequence which judged coincidence by the above-mentioned decision means, and was read from the above-mentioned memory measure to the above-mentioned switching means is detected.

[Claim 3]The sending set according to claim 2 providing further an informing means which reports when not carrying out the transmission output of the designation code sequence which the above-mentioned transmitting means did not detect instructing operation of the above-mentioned switching means, but read from the above-mentioned memory measure.

[Claim 4]The sending set according to claim 1, wherein it changes the above-mentioned transmitting means into a dial tone signal and it carries out the transmission output of the above-mentioned designation code sequence.

[Claim 5]The sending set according to claim 1, wherein it changes the above-mentioned transmitting means into an infrared signal and it carries out the transmission output of the above-mentioned designation code sequence.

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[Translation done.]

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#### DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application]This invention relates to the sending set applied to the electronic notebook etc. which have an auto-dial function and a schedule management function, for example.

[0002]

[Description of the Prior Art]The schedule data based on character strings more arbitrary than before are made to memorize with a corresponding date and time information, Carry out the list display of the schedule data made to memorize by specifying the date and week, and the moon by a calendar display etc., or, When it becomes the date concerned and time, judge this and alarm information etc. are performed, and generally the electronic notebook which has a schedule

management function for which the above-mentioned schedule data are displayed on an indicator has spread widely.

[0003]

[Problem(s) to be Solved by the Invention]In the electronic notebook which has the above schedule management functions, it is difficult for the user of the electronic notebook to perform the input of schedule data himself to the last, and for persons other than a user to make schedule data input and memorize without notice.

[0004]Therefore, when persons other than a user want the electronic notebook which the user possesses by using a certain message corresponding to time as schedule data to memorize. The electronic notebook was borrowed from the user by itself, and the above-mentioned schedule data were inputted directly, or the contents of schedule data were told to the user, and that I only have you input instead did not have a method.

[0005]In an individual selective-calling radio communications system, An audible tone, vibration, etc. not only report that there was merely a call only, but it receives the message information of a digit string, a character string, or a picture (graphics) simultaneously, and many selective calling receivers which can be displayed by an indicator are used recently especially.

[0006]However, in this kind of receiver, it is just merely that the message from a sending person is only receivable by the company which is performing paging service via the public line instancy, and the time etc. which the side which transmits a message transmits were not able to be set up freely.

[0007]This invention was made in view of the above actual condition, and there is a place made into the purpose in providing the sending set which can perform easily also contacting by phone the partner who is in the position which separated at predetermined time, or transmitting predetermined data.

[0008]

[Means for Solving the Problem]Namely, a memory measure which this invention makes a designation code sequence correspond with time, and is memorized, a time check — a means and this time check — with a decision means which judges this when time obtained from a means is in agreement with time memorized by the above-mentioned memory measure. It has a transmitting means which reads and carries out the transmission output of the designation code sequence memorized by this decision means corresponding to time which judged coincidence from the above-mentioned memory measure.

[0009]

[Function]having the above composition — a time check — when the time obtained from a means is in agreement with the time memorized by the memory measure which makes a designation code sequence correspond with time, and memorizes it, a decision means carries out the decision means of this. The designation code sequence the transmitting means is remembered to be by judgment of this decision means corresponding to the time which obtained coincidence is read from the above-mentioned memory measure, for example, a transmission output is changed and carried out to a dial tone signal. It becomes possible to transmit the data corresponding to time, such as schedule data, to the partner who is in the position which separated by this easily, for example, one schedule data can be made very useful at many people — transmitting registration can be carried out.

[0010]

[Example]One working example at the time of applying to the paging receiver which has a dial function which outputs a dial tone signal for this invention below is described with reference to Drawings. **Drawing 1** has illustrated the Assessment on Search Report by Designated Searching Authority of the paging service using the paging receiver 1 concerning this invention. In this case, to the telephone exchange network 3 to which the telephone terminals 2, such as a touch-tone phone, are connected. By the center (CC place) 4 and the transmitting base station 5 which a \*\*JINGU service company has jurisdiction over being connected, for example, transmitting a predetermined call number via the telephone terminal 2 with a dial tone signal with the own paging receiver 1A. A

call is made by other paging receivers 1B of composition as well as the own paging receiver 1A corresponding to a call number via the center (CC place) 4 and the transmitting base station 5 which a \*\*--JINGU service company has jurisdiction over from the telephone exchange network 3 to which this telephone terminal 2 was connected.

[0011] **Drawing 2** shows the appearance composition, **drawing 2 (A)** is a front view and **drawing 2 (B)** is the right side view. The paging receiver 1 comprises the case body 11 and the covering device 12, and **drawing 2 (A)** and (B) shows the state where the covering device 12 was opened. [ both ]

[0012] Namely, the covering device 12 is what is provided by the pivot which is not illustrated here enabling free rotation, The liquid crystal display panel 13 is formed in the inner surface side of this covering device 12, and. To the inner surface side of the case body 11 contacted with this liquid crystal display panel 13 where the covering device 12 is closed. A "menu" key, a "functional" key, an "alphanumeric" key, a "sign" key, a "pause" key, The function key 16 which consists of a "blank" key, "deletion" key, "insertion" key, "registration" key, a "search" key, and a cursor key for four-directions all directions, "1" - "9" and "0" key, the "\*" key, and the dial key 15 that consists of the "#" key are allocated, These are protected where the covering device 12 is closed in the time of carrying, etc.

[0013] The above-mentioned liquid crystal display panel 13 comes to be a thing of the dot-matrix type of the side [ of 20 characters ] x length of four characters which can be displayed by a total of 80 characters in a 5 dots wide and 7 dots long character at 31 dots by 119 dots, for example, It has a back light which becomes with EL (electroluminescence) turned on if needed.

[0014] The dial key 15 can input a kana character, the alphabet, etc. by the combination operation other than a number with the function key 16.

It shall also have a telephone number bank function which makes a telephone number correspond with a name, makes memorize, and is displayed selectively if needed, and a calculator function which performs numerical computation using the dial key 15 and the function key 16 further.

[0015] The dial send key 17 for transmission instruction is formed so that it can be operated, also where the covering device 12 is closed, and LED lamp 14 in which summons voice etc. are shown near this dial send key 17 is allocated.

[0016] The loudspeaker 18 which served also as the outputting part of a dial tone signal, and the IR transmission and reception section 19 are formed in the right lateral of the case body 11. This IR transmission and reception section 19 is for performing transmission and reception by electronic equipment and an infrared signal provided with other same paging receiver 1 or other infrared ray communication functions.

The inside is equipped with the infrared element part which becomes with the infrared light sensing portion which becomes by a photo-transistor etc., a LED lamp, etc.

[0017] Although a graphic display is not carried out, the reset key for making the left lateral of the case body 11 stop the information of the electric power switch for turning on and off a power supply and summons voice, etc. shall be provided.

[0018] Next, **drawing 3** explains the composition of the electronic circuit provided in the above-mentioned case body 11 and the covering device 12. 21 is an antenna in the figure and the electric wave of the call containing the message received with this antenna 21 is sent to the receive section 22. This receive section 22 performs intermittent reception by the drive of the decoder section 24, amplifies a reception radio wave, gets over, and sends out to the decoder section 24. The ID code which decoded the signal to which it restored in the decoder section 24, and was individually assigned to the paging receiver concerned, It judges whether the number called with reference to ID-ROM23 which memorized frame data, address information, etc. in detail is in agreement with a self service number, and when in agreement, a coincidence detection signal and the message information continued and received are sent to the control section 25.

[0019]The control section 25 is what performs motion control of other whole circuit according to the input signal from the key input section 26 which becomes by the signal and the above-mentioned dial key 15, the function key 16, and the dial send key 17 from the decoder section 24. It is connected with the indicator 27 which consists of the above-mentioned liquid crystal display panel 13 and its drive circuit, and ROM28, RAM29, the loudspeaker 18, LED lamp 14, the vibrator 30, and the IR transmission and reception section 19 are connected.

[0020]The loudspeaker 18 via the drive circuit which is not illustrated under control of the control section 25 it not only outputs summons voice by an informing sound, but, As for LED lamp 14, the vibrator 30 outputs summons voice for summons voice by vibration by blink of light similarly [ it is also possible to output the call number for calling other paging receivers as a dial tone signal, and ].

[0021]ROM28 memorizes the control program beforehand prepared for the control section 25, and it has memorized the character code matrix and symbol data table for a free message.

[0022]With in this case, the character code matrix for a free message. As shown in **drawing 4**, the katakana corresponding to the numerical value of double figures used as a designation code, the alphabet, a number, and a sign are shown, and katakana "FU" is obtained because the alphabet "G" specifies the code "63" by specifying the code "27", for example.

[0023]It is what memorizes both the emblem which matches with the symbol data number (No.) which serves as a designation code of a symbol as it is indicated in **drawing 5** as a symbol data table, and specifies the use of schedule data or a message, and its contents of a use. For example, by specifying the symbol data number "02", the emblem and its contents of a use "concert" of the "dome shape stadium" are read, and it is obtained.

[0024]Returning to **drawing 3**, regardless of the injection state of an electric power switch, backup of a power supply is received so that a memory content may not be eliminated, and although RAM29 is not illustrated, it constitutes a clock register in part, is carrying out update storage of the time information of the regular present, and it has a memory map as shown in **drawing 6**. That is, RAM29 has the telephone number (TEL) bank memory area 31, the incoming message memory area 32, and the schedule-data memory area 33.

[0025]The telephone number bank memory area 31 is a field which consists of a contact register which memorizes the call number of the flag register, identification number register and name register in which a flag is set, a paging receiver, etc. when transmitting, and memorizes the data for a multiple name.

[0026]The incoming message memory area 32 is a field which consists of the address register, message content register, and arrival date register of the message which received, and memorizes two or more sets of receiving message data.

[0027]Although the schedule-data memory area 33 is not illustrated here, it is the form summarized, for example for every schedule for one month. The address register corresponding to the incoming message memory area 32, and the display information register which memorizes the date, a time zone, a symbol data number (No.), and a message content. It shall consist of a transmitting flag register, a date and a time register, a contents register of an output, and a check flag register in which a transmission output is carried out by the pressure operated of the dial send key 17 and that checks \*\*\*\*\* else.

[0028]Next, operation of working example constituted as mentioned above shall be explained. Here, with the paging receiver 1A, use message information as schedule data and Creation. The flow chart of **drawing 9** explains the case where register, and transmit these created schedule data to the paging receiver 1A concerned and the paging receiver 1B of an identical configuration, and the paging receiver 1B side is also made to register.

[0029]**Drawing 9** is what shows the operation at the time of the register mode from powering on with the paging receiver 1. If one [ the electric power switch which the case body 11 side does not illustrate ], the liquid crystal display panel 13 will perform the display to which selection change in the mode as shown in **drawing 10** is urged, and it is judged whether message register mode was

chosen (Step A1).

[0030]Namely, the "message tow good mode" which shows message register mode by drawing 10, The character of the "settee" which shows the "schedule mode" which shows schedule registration mode, and configuration mode is displayed, and the cursor C is displayed on one of them, for example, the head position in the "message tow good mode."

[0031]By this displaying condition, the moving display of the cursor C is carried out by operating suitably up-and-down each cursor key of the function key 16, Operation with the selected mode will be performed by operating either of right-and-left each cursor key of the function key 16, where the mode for which it asks will be chosen and the mode is chosen further.

[0032]However, if either of right-and-left each cursor key of the function key 16 should be operated where the cursor C is displayed on "schedule modes" other than the "message tow good mode", or the head position of a "settee" here, It is judged as that as which schedule registration mode or configuration mode was chosen (Step A1), and operation under the mode concerned is performed (Step A15).

[0033]If either of right-and-left each cursor key of the function key 16 should be operated where the cursor C is displayed on the head position in the "message tow good mode", It is judged as that as which message register mode was chosen (Step A1), and next, as shown in drawing 11, the liquid crystal display panel 13 performs the display which urges to the selection what kind of message is registered, and it is judged whether it is registration of schedule data (Step A2).

[0034]Namely, the character of the "schedule" which registers "TSUUJOU" which registers the usual message, and schedule data in drawing 11 is displayed, and the cursor C is displayed on one of these, for example, the head position of a "schedule", and. The character of "N" which shows "SHINKISAKUSEI?" to which the selection is urged [ whether it is what creates the data to register newly, and ], "Y" which shows affirmation, and denial is displayed, and, on the other hand, the new cursor C1 is displayed on the character side of "Y."

[0035]By this displaying condition, by operating suitably up-and-down each cursor key of the function key 16, the moving display of the cursor C will be carried out to either "TSUUJOU" or a "schedule", and the kind of message to register will be chosen.

[0036]However, if either of right-and-left each cursor key of the function key 16 is operated where the cursor C is displayed on the head position of a "schedule" here, It judges as what registers schedule data (Step A2), The recognition symbols "\*4\*6" of schedule data are set automatically as RAM29 inside, Subsequently, it is judged whether carrying out the moving display of the cursor C to the head position of "SHINKISAKUSEI?", transmitting registered schedule data, and making it registering with the other party or schedule data are created newly (step A3).

[0037]Operate either of right-and-left each cursor key of the function key 16, and In this case, "Y", It is that by which chooses "N", affirmation of new production and denial are become final and conclusive by finally operating either of up-and-down each cursor key, and the register operation is actually started, Supposing it operates either of up-and-down each cursor key in the state where the "Y" side has the cursor C1 here, Judge as what creates schedule data newly (step A3), and the write-in state to the schedule-data memory area 33 is set up, and the A-scan display format of schedule data as shown in drawing 12 is displayed with the liquid crystal display panel 13.

[0038]In this drawing 12, time scale TS corresponding to 24 hours to which the input of the time of that schedule or a time zone is urged with the sign "/" to which the input of the date is urged is displayed on the upper part of a screen.

[0039]By this displaying condition, the date of schedule data is inputted by operation of the numerical keypad of the dial key 15 at 4 figures (step A4), If the time of the schedule concerned is similarly continuously inputted by 4 figures by operation of the numerical keypad of the dial key 15 (step A5), it will be judged whether next, the time zone from start time to finish time is inputted for this inputted time (Step A6).

[0040]This, For example, make the following position of the time information inputted on the screen

of the liquid crystal display panel 13 indicate the sign “—” by blink, and. For example, it is in the state where the display to which specification of the unit of set time is urged by the input of a numerical keypad as shown in “day →1”, “time →2”, and “minute →3” was made to perform in order to make the set time which sets up a time zone specify, and it is judged whether there is any operation of either of numerical-keypad “1” – “3” of the dial key 15.

[0041]If it judges that there is operation of this numerical keypad, therefore a time zone is inputted here (Step A6). According to the inputted contents, the specification format of the set time of a time zone is created (Step A7), and the data which specifies a time zone by the input of set time continuously is created (Step A8).

[0042]Here, by above-mentioned step A4, for example as a date “10(Mon.)20 (Sun)”, If “04” should be inputted by “time (2)” as time as a unit of “10(at time)00 (minute)”, and set time and should be inputted as set time by step A5, respectively, it will be set to “10201000\*204” as a data configuration corresponding to the time portion in schedule data. The period specification format whose time and following double figure “\*2” the date and the following 4 figures “1000” is time bases in 4 figures “1020” of this data to begin, and the last double figure “04” show set time.

[0043]that is, according to this data configuration, it is shown that it is “10:00 to [ on October 20 ] 4 hours (namely, — up to 14:00).” “\*0” which shows that the above-mentioned period specification format does not have set time other than the above-mentioned time basis “\*2”, “\*1” which show that it is a minute unit, and “\*3” which show that it is a Japanese unit are prepared.

[0044]**Drawing 13** shows the displaying condition of the liquid crystal display panel 13 in the case where the above setting out is performed, and into a figure, the time zone portion which corresponds by time scale TS by setting out of the above-mentioned time zone is displayed, as hatching shows.

[0045]Above-mentioned step A7 and A8 the processing for a time zone input. It does not carry out, when it is judged that a time zone input is not performed at the above-mentioned step A6 (i.e., when keys other than numerical-keypad “1” – “3” are operated in the state where it was displayed on “day →1”, “time →2”, “minute →3”, and the liquid crystal display panel 13 in order to make set time specify).

[0046]Then, the list display of each emblem shown by above-mentioned **drawing 5** is carried out to the bottom of screen of the liquid crystal display panel 13, one of them, for example, the emblem position of “telephone”, is made to indicate the cursor C by blink, and the emblem in schedule data is made to choose it as it (step A9).

[0047]If the 6th emblem is made to choose by the right-and-left cursor key of the function key 16 for example, either of the up-and-down cursor keys is operated continuously here and it becomes final and conclusive. The symbol data number is read from ROM28, it is set as RAM29, and the moving display only of the selected emblem is carried out to the position of the liquid crystal display panel 13, and. Each processing of the above step A3 – A9 in which the display of other emblems which remain is erased and the selection process of a symbol is ended is not performed when it is judged that registration of the usual message data instead of schedule data is performed at the above-mentioned step A2.

[0048]Then, the message content in schedule data or the message content of a usual message is inputted as message data (Step A10). The input of this message carries out input creation of the usual character string by combination operation with the function key 16 and the dial key 15, and the inputted character string is displayed on the liquid crystal display panel 13 one by one.

[0049]**Drawing 14** illustrates the contents of the message displayed on the liquid crystal display panel 13 in this way. Here, “ticket 00-1111-2222 (this number shows a telephone number)” should be inputted as a message content. As a data configuration of the message inputted at this time, it becomes “06\*0742248045\*8#.” The code the double figures “06” of this data to begin declare it to be that a symbol data number and the following triple figure “\*07” are the free message formats of above-mentioned **drawing 4**, the code the code of a message “ticket” and the following double

figure "8" declare the end of a free message format to be in the following 8 figures "42248045" ----- and, It is a code the following 12 figures "00\*1111\*2222" declare the code of a telephone number "00-1111-2222", and the last single figure "#" declares the end of a message to be.

[0050]And if the end of a message input is directed to operation of for example, "registration" key of the function key 16, In this way, the inputted schedule data are written in the region of the corresponding date, the time, and the message content in the schedule-data memory area 33, and setting out of whether to transmit this inputted data subsequently is performed.

[0051]A blink indication of the sign TO which **drawing 15** shows the displaying condition in the liquid crystal display panel 13 at this time, and shows a transmitting established state to the right short side in a screen is given, and the cursor C is displayed on the starting point portion of the data which should be carried out a transmission output. It is moved by operation of the cursor key of the function key 16, and this cursor C operates "registration" key of the function key 16, when setting up a start position.

[0052]When "registration" key which sets up a start position is operated, judgment with transmitting these schedule data is made (Step A11), and that end point position is set up in order to specify the range of the contents which subsequently carry out a transmission output (Step A12).

[0053]It is what is performed by operation of "registration" key after setting out of this end point position also operates a cursor key and moves the cursor C, If specification of the range is made, it will be shown in **drawing 16**, and the underline UL will be added and displayed on the transmission data length concerned, and. The flag "1" is set in the corresponding transmitting flag register of a position in the schedule-data memory area 33, and the date, the time, the contents of an output, and confirmation flags by which a transmission output is carried out further are set.

[0054]**Drawing 8** illustrates the contents of the schedule-data memory area 33 at this time. The data currently displayed on the liquid crystal display panel 13 by the input process of the above-mentioned schedule data as shown in a figure in the position of "20 (Sun.)" of the field of the "October data" A time zone "10:00 to 14:00", Collect as a symbol data number "06" and a message content "ticket 00-1111-2222 (actually based on the code of **drawing 4**)", and it is written in the field of display information, The date "20", the time "9:50", and the contents of a transmission output "00-1111-2222" in October when alarm information was set up are set so that the transmission output of the flag "1" may be set and carried out to the transmitting flag register corresponding to it.

[0055]When time "9:50" to transmit is set up automatically by subtracting fixed time, for example, "10 minutes", from the start time "10:00" of the above-mentioned schedule data and it becomes this time, performing alarm information for transmission is located here, but. As mentioned above, subtract fixed time, and it is not set up automatically, but a user may be made to set up time arbitrarily by a manual.

[0056]In this way, after finishing the setting processing of transmission, the management of control is transferred to alarm processing of schedule data, and processing of this **drawing 9** is ended. When it is judged as the thing which does not create schedule data newly by above-mentioned step A3, but transmits registered schedule data to the schedule-data memory area 33, and is made to register into the other party, By carrying out a list display using a part of each schedule data already memorized by the schedule-data memory area 33, selected designation of the arbitrary things is carried out, and it becomes final and conclusive (Step A14).

[0057]Here, selected designation of the schedule data in which "10(Mon.)12 (Sun.)" and "9:00--" consist of the schedule-data memory area 33 shown in **drawing 8** "21 SAHOMEDETOU" shall be carried out, and it shall transmit. A symbol data number is not set to these schedule data, and the display of an emblem is not performed.

[0058]It is what these schedule data are read from the schedule-data memory area 33 when schedule data are become final and conclusive, and is displayed on the liquid crystal display panel 13, The range of the contents which carry out a transmission output like the schedule data followed



and new-reproduced [ above-mentioned ] to Step A12 to the displayed schedule data is specified. [0059]Drawing 17 is what illustrates the state where the range of the contents which carry out a transmission output in this way was specified, Like above-mentioned drawing 16, the underline UL is added and displayed on the range concerned, and. The flag "1" is set to drawing 8 by the corresponding transmitting flag register of a position in the schedule-data memory area 33 so that it may be shown. The date "12", the time "8:50", and the contents of a transmission output "21 SAIOMEDETOU (actually based on the code of drawing 4)" in October when alarm information was set up are set so that a transmission output may furthermore be carried out.

[0060]Subsequently, drawing 18 explains the contents of processing at the time of actually transmitting the schedule data which carried out transmitting setting out as mentioned above.

Drawing 18 shows processing of the schedule alarm shown at the above-mentioned step A13, and at the time of processing, always carrying out update storage of the current time using the clock register in RAM29 — a time check — operation, [ perform and (Step B1) ] Where the contents of this clock register are updated, it is repeated and judged whether there are any schedule data used as the setting-out time which searches the inside of the schedule-data memory area 33 with that updated time information concerned, and carries out alarm information (step B-2).

[0061]With in this case, the temporal data memorized with that transmission flag to the schedule data in which the transmission flag "1" is set up. It is what judges whether it became the setting-out time which carries out alarm information with the data of the indication time within the time zone in display information to the schedule data in which the transmission flag "1" is not set up, The informing sound according to the above-mentioned loudspeaker 18 promptly when it judges that there is a thing used as the setting-out time which carries out alarm information, After carrying out the alarm report and output of having become the setting-out time of schedule data using that by which blink of light by LED lamp 14 or vibration by the vibrator 30 was set up either (Step B3), It is judged whether the transmission flag "1" is set as the schedule data (step B4).

[0062]When it is judged that the transmission flag "1" is not set as the schedule data which carried out alarm information, Noting that the schedule data do not need to transmit to others, All the data of the display information of schedule data then corresponding from the schedule-data memory area 33 is read, a display output is carried out with the liquid crystal display panel 13 (step B5), and processing of this drawing 18 is ended above.

[0063]When it is judged that the transmission flag "1" is set as the schedule data which carried out alarm information by above-mentioned step B4, Subsequently, read all the data of the display information of schedule data corresponding from the schedule-data memory area 33 like above-mentioned step B5, and carry out a display output with the liquid crystal display panel 13, and. The portion of the contents of an output in the displayed message content which carry out a transmission output is expressed as the underline UL with reference to a memory content, and the contents are checked (step B6).

[0064]Then, when pressing operation of the user of the paging receiver 1 with which these schedule data were displayed doing pressing operation of the dial send key 17 is stood by and carried out, judge this (Step B7), perform a send action, and. "1" is set to the confirmation flags of the schedule data in which the schedule-data memory area 33 corresponds (Step B9).

[0065]As data of this dial tone signal by which a transmission output is carried out, As it mentioned above following the telephone number, for example, the recognition symbols of schedule data "\*4\*6", The date "1020", time "1000", the period specification format that is time bases "\*2", Set time "04", a symbol data number "06", the code that declares that it is a free message format "\*07", The code "42248045" of a message "ticket", the code which declares the end of a free message format "\*8", The inside of the code "#" which declares the code "00\*1111\*2222" of a telephone number "00-1111-2222", and the end of a message, It is transmitted continuously, the range of the underline UL of drawing 16, i.e., the code of "00-1111-2222", "00\*1111\*2222" which were set up as contents of a transmission output at the time of register mode.

[0066]When it is judged that pressing operation of the dial send key 17 is not carried out at the above-mentioned step B7, To the check flag register of the schedule data in which the schedule-data memory area 33 corresponds, since a flag continues being "0", carry out alarm information again after fixed time, for example, 5 minutes, and. The message of the purport that the schedule data which should be carried out a transmission output with the liquid crystal display panel 13 have not been transmitted yet is displayed for warning (Step B8), and processing of this drawing 18 is ended above.

[0067]Although the contents of a transmission output were set up by the manual entry at the time of register mode, For example, in transmitting to a very intimate person using the telephone number (TEL) bank stored in RAM29, Only by specifying the name of a contact, from the telephone number bank memory area 31, the contact corresponding to this name can be read and it can register with the schedule-data memory area 33 automatically.

[0068]Finally, the message data transmitted with this paging receiver 1 is shortly explained using drawing 19 about the processing in the case of receiving and registering. Drawing 19 shows the contents of processing in the time of the mail arrival mode in which the usual waiting carrier is performed, and at the time of processing. Repeat intermittently that the self address memorized by ID-ROM23 is called, and it is stood by (Step C1), The message data which calls when there is a call, and follows an address is incorporated, and the incoming message memory area 32 of RAM29 is made to add and memorize an address (Step C2).

[0069]Subsequently, when it checks whether the message data had had the data which this incoming message memory area 32 was made to memorize (Step C3) and there is no message information. The report and output only of there having only been mail arrival using that by which blink of light by the informing sound by the above-mentioned loudspeaker 18 and LED lamp 14 or vibration by the vibrator 30 was set up first either is carried out (Step C10).

[0070]When it is judged that there was message data by the incorporation of data at the above-mentioned step C3, it is judged by whether the recognition symbols "\*4\*6" of schedule data occur in data whether the message data is schedule data (Step C4).

[0071]When it is judged that there are no recognition symbols of schedule data and they are not schedule data, Since the message data will be the usual message data without time information, The report and output of there having been mail arrival using that by which blink of the informing sound in the above-mentioned loudspeaker 18 and the light in LED lamp 14 or vibration by the vibrator 30 was set up first either is carried out, and the display output of the received message data is carried out with the liquid crystal display panel 13 (Step C9).

[0072]When it is judged that the recognition symbols of schedule data occur in the message data incorporated at Step C4, and they are schedule data, The report and output of there having been mail arrival using that by which blink of the informing sound in the above-mentioned loudspeaker 18 and the light in LED lamp 14 or vibration by the vibrator 30 was set up first either is carried out, and the display output of the received schedule data is carried out with the liquid crystal display panel 13 (Step C5).

[0073]A user is made to do selected designation of whether it is required schedule data by displaying characters, such as "KONOSUKE joule day TAWOTOUROKUSURU?", using some screens of the liquid crystal display panel 13, It is judged whether it registers with the schedule-data memory area 33 according to the contents of specification (Step C6).

[0074]When the selected designation of the purport that the received schedule data are not registered is made, the received schedule data are canceled, and registration to the schedule-data memory area 33 is not performed, but it limits to the memory to the incoming message memory area 32 (Step C8).

[0075]When the selected designation of the purport that the schedule data received at Step C6 are registered is made, It registers with the schedule-data memory area 33 with the address with which the above-mentioned incoming message memory area 32 corresponds further with the received

schedule data. It displays that schedule data duplicate in time [ when other schedule data which overlap especially with a designated time belt are already registered into the schedule-data memory area 33 ] are memorized on the liquid crystal display panel 13. After taking a check, these received schedule data are made to newly register as switched data (Step C7).

[0076]"paper climax nub 9999-88-7777" of 10(Mon.)16 (Sun.) "" in above-mentioned drawing 8, and "7:00 to 8:00" It is what the becoming schedule data are received in this way, and shows what was registered. The fact that the corresponding address "10" in the incoming message memory area 32 is added to the head position shows being received. In this case, since setting out is not made in order to be outputted, the flag "1" is not set in a transmitting flag register, but it has become "0."

[0077]When set to "7:00" on "October 16" with this paging receiver 1A, a display as shown in drawing 20 as usual calendar Shimesu by processing of above-mentioned drawing 18 is performed.

[0078]Although above-mentioned working example explained as what outputs the contents of a transmission output with a dial tone signal after the report and output by the schedule alarm shown by drawing 3. Prepare the peculiar memory called an output box, transmit from RAM29 only the contents by which a transmission output is carried out simultaneously with the report and output by schedule alarm, and it is made to store in the above-mentioned output box. When a user carries out near the telephone terminal 2, he may be made to do collective sending of the data stocked by this output box from the telephone terminal 2.

[0079]It is drawing 21's illustrating the composition which replaced with above-mentioned drawing 3 and added such a memory 41 for output boxes (it is indicated as "RAM for the output BOX" by a diagram), and having such composition, Time is not taken from RAM29 to search and read-out after alarm information, and user-friendliness improves.

[0080]In this case, the display output of the data of the display information of schedule data corresponding in step B6 of above-mentioned drawing 18 is carried out with the liquid crystal display panel 13. The portion of the contents of an output in the displayed message content which carry out a transmission output is expressed as the underline UL with reference to a memory content. This memory 41 for output boxes is made to transmit and memorize, as a dashed line shows these contents of an output in a figure (Step B10), and when the dial send key 17 is judged that pressing operation was carried out at Step B7 after that, it comes to perform a send action.

[0081]The data made to store in the memory 41 for output boxes in above-mentioned drawing 21 not only in the dial tone signal from the loudspeaker 18. It is shown as composition which can transmit also as an infrared modulating signal from the IR transmission and reception section 19. It can respond, when it is hesitated for the choice of a send action to spread by this and for the partner who should transmit to transmit schedule data directly in the voice of what is present in the neighborhood to some extent, or also when the infrared ray interface function is installed in the telephone terminal 2.

[0082]This invention is not limited only to above-mentioned working example, in the range which does not change a gist, changes suitably and can be carried out. For example, it is applicable to the sending set various type which has not only the paging receiver provided with the dial function but a data communication facility. That is, this invention is applicable to the portable telephone of a digital system, the personal computer which has a communication function, an electronic notebook, the communication function which communicates with infrared rays etc. further, etc.

[0083]

[Effect of the Invention]As stated above, according to this invention, the partner who is in the position which separated can also be provided with the sending set which can transmit the data corresponding to time, such as schedule data, certainly and easily.

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[Translation done.]

## \* NOTICES \*

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- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

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## DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] The figure showing the composition of the communications system concerning one working example of this invention.

[Drawing 2] The figure showing the appearance composition of the paging receiver 1 concerning the working example.

[Drawing 3] The block diagram showing the circuitry of the paging receiver 1 concerning the working example.

[Drawing 4] The figure which illustrates the character code matrix concerning the working example.

[Drawing 5] The figure which illustrates the symbol data table concerning the working example.

[Drawing 6] The figure which illustrates the memory map composition of RAM concerning the working example.

[Drawing 7] The figure which illustrates the memory state of the telephone number bank concerning the working example.

[Drawing 8] The figure which illustrates the memory state of the schedule-data memory area concerning the working example.

[Drawing 9] The flow chart which shows the contents of processing of the register mode of the transmission content concerning the working example.

[Drawing 10] The figure showing the displaying condition at the time of operation concerning the working example.

[Drawing 11] The figure showing the displaying condition at the time of operation concerning the working example.

[Drawing 12] The figure showing the displaying condition at the time of operation concerning the working example.

[Drawing 13] The figure showing the displaying condition at the time of operation concerning the working example.

[Drawing 14] The figure showing the displaying condition at the time of operation concerning the working example.

[Drawing 15] The figure showing the displaying condition at the time of operation concerning the working example.

[Drawing 16] The figure showing the displaying condition at the time of operation concerning the working example.

[Drawing 17] The figure showing the displaying condition at the time of operation concerning the working example.

[Drawing 18] The flow chart which shows the contents of processing of schedule alarm information and transmission concerning the working example.

[Drawing 19] The flow chart which shows the contents of processing of mail arrival \*\*\*\*\* concerning the working example.

[Drawing 20] The figure showing the displaying condition at the time of operation concerning the

working example.

[Drawing 21] The block diagram which illustrates other circuitry of the paging receiver 1 concerning the working example.

[Description of Notations]

- 1, 1A, 1B — Paging receiver
- 2 — Telephone terminal
- 3 — Telephone exchange network
- 4 — Center
- 5 — Transmitting base station
- 11 — Case body
- 12 — Covering device
- 13 — Liquid crystal display panel
- 14 — LED lamp
- 15 — Dial key
- 16 — Function key
- 17 — Dial send key
- 18 — Loudspeaker
- 19 — IR transmission and reception section
- 21 — Antenna
- 22 — Receive section
- 23 — ID-ROM
- 24 — Decoder section
- 25 — Control section
- 26 — Key input section
- 27 — Indicator
- 28 — ROM
- 29 — RAM
- 30 — Vibrator
- 31 — Telephone number bank memory area
- 32 — Incoming message memory area
- 33 — Schedule data memory area
- 41 — Memory (RAM) for output boxes

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[Translation done.]

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2. \*\*\*\* shows the word which can not be translated.

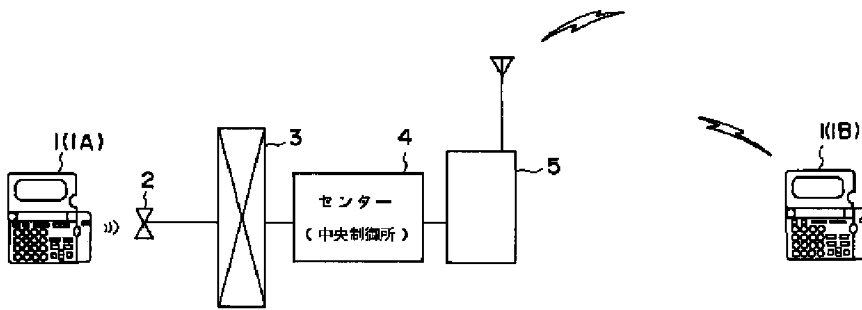
3. In the drawings, any words are not translated.

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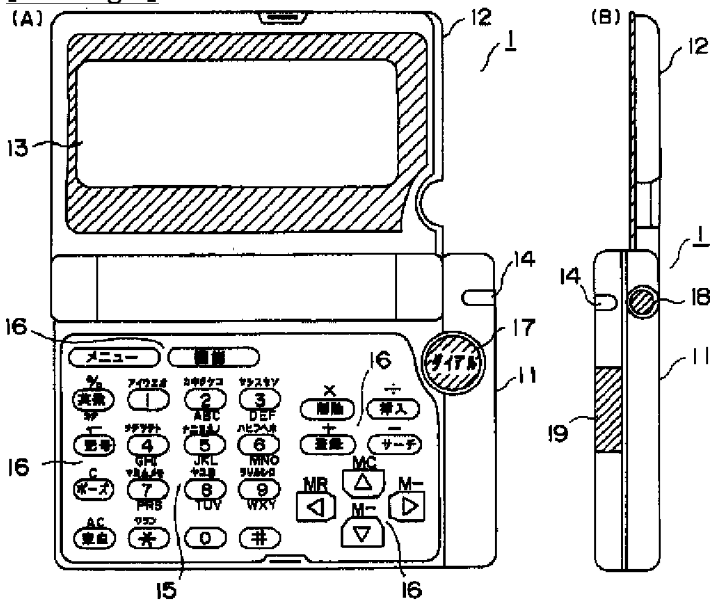
## DRAWINGS

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[Drawing 1]



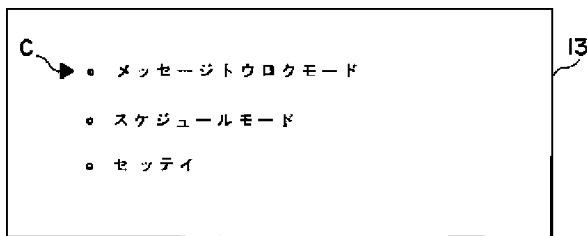
[Drawing 2]



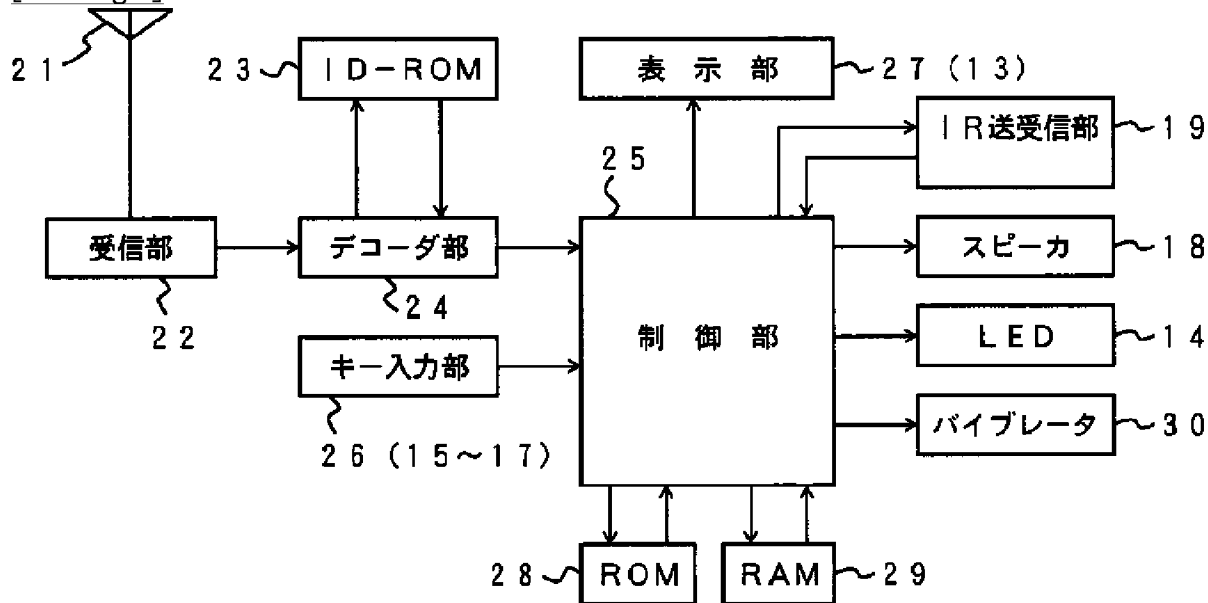
[Drawing 4]

	1	2	3	4	5	6	7	8	9	0
1	ア	イ	ウ	エ	オ	A	B	C	D	E
2	カ	キ	ク	ケ	コ	F	G	H	I	J
3	サ	シ	ス	セ	ソ	K	L	M	N	O
4	タ	チ	ツ	テ	ト	P	Q	R	S	T
5	ナ	ニ	ヌ	ネ	ノ	U	V	W	X	Y
6	ハ	ヒ	フ	ヘ	ホ	Z	:	'	?	.
7	マ	ミ	ム	メ	モ	ア	イ	ウ	エ	オ
8	ヤ	(	ユ	)	ヨ	ャ	ュ	ョ	-	ッ
9	ラ	リ	ル	レ	ロ	1	2	3	4	5
0	ワ	ヲ	ン	・	°	6	7	8	9	0






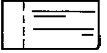
[Drawing 10]



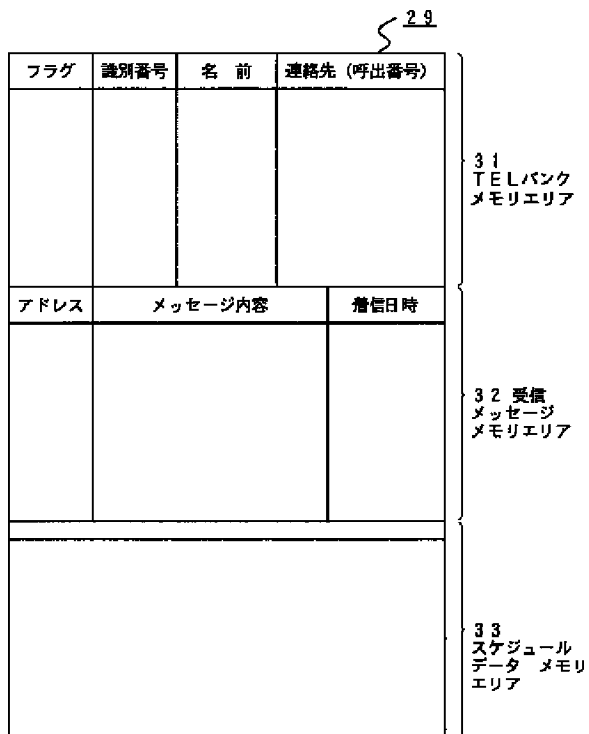
[Drawing 3]



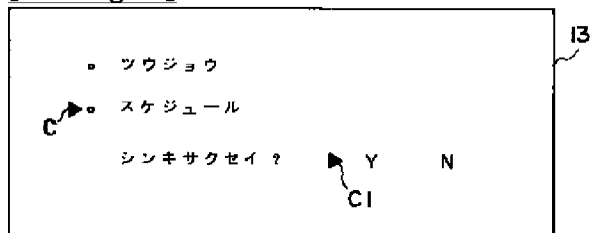
[Drawing 5]

シンボル データNo.	シンボル	用 途
01		電話せよ
02		コンサート
03		手 紙
04		移動（出張等）
05		投画指示
06		チケット
...	...	...

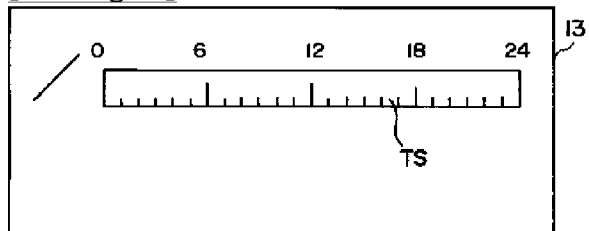
[Drawing 6]



[Drawing 11]



[Drawing 12]



[Drawing 7]

31

フラグ	識別番号	名 前	連絡先 (呼出番号)
0	0000	サイトウ	000-000-0000
0	1111	オオイシ	111-111-1111
0	2222	ムラカミ	222-222-2222
0	3333	ヤシキ	333-333-3333
0	5555	タナカ	555-555-5555
0	6666	カミヤマナブ	999-88-7777

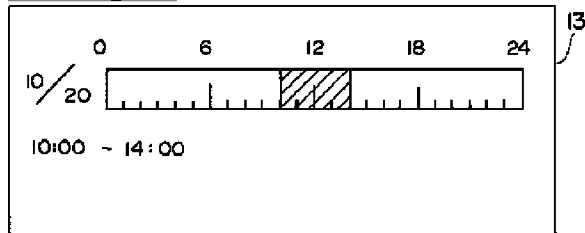


[Drawing 8]

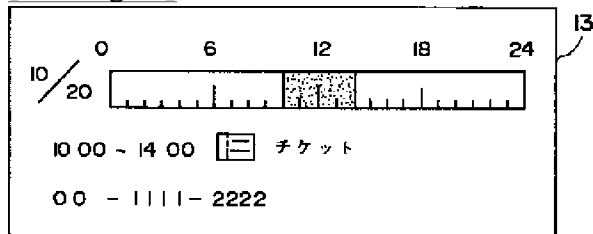
5 33

アドレス	10月データ					送信フラグ	日	時間	出力内容	確認フラグ
	表示内容									
	日	時間帯	シンボルデータNo.	メッセージ内容						
	12	9:00~		21サイオメデトウ	0	12	8:50	21サイオメデトウ	0	
	10	18	7:00~ 8:00	02	カミヤマナブ9999-88-7777	0				
	20	10:00~14:00	06	チケット 00-1111-2222	1	20	9:50	00-1111-2222	0	

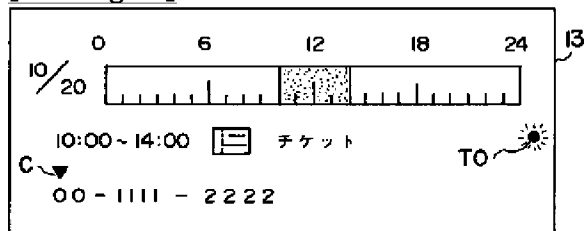
[Drawing 13]



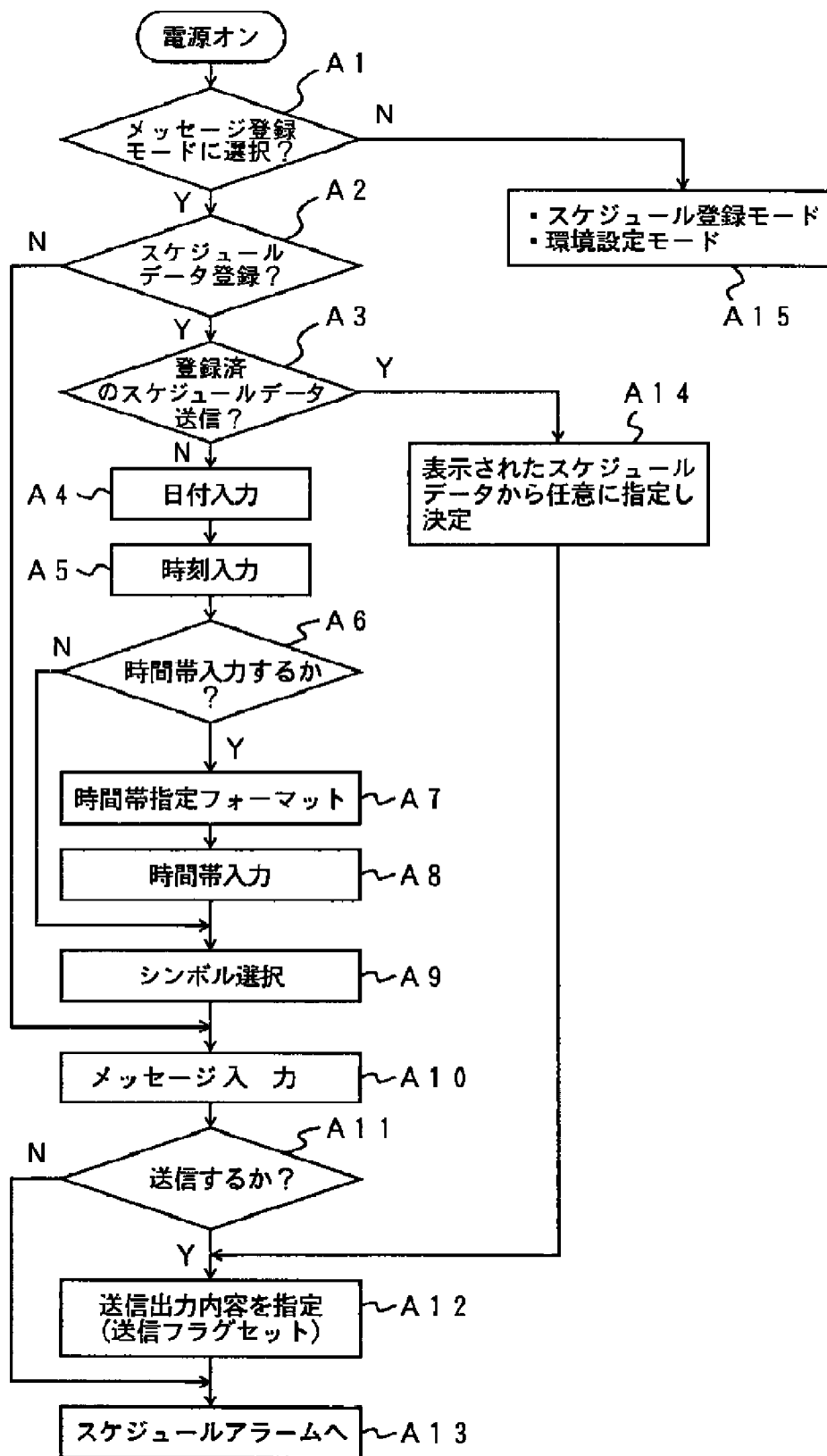
[Drawing 14]



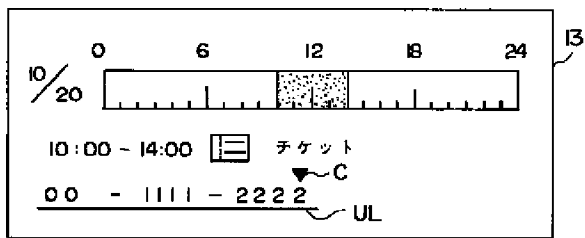
[Drawing 15]



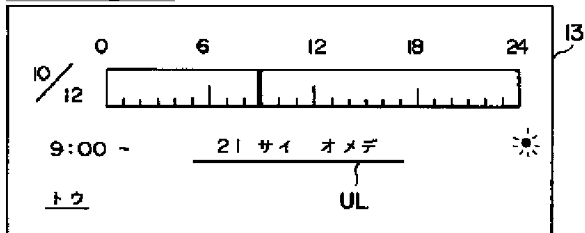
[Drawing 9]



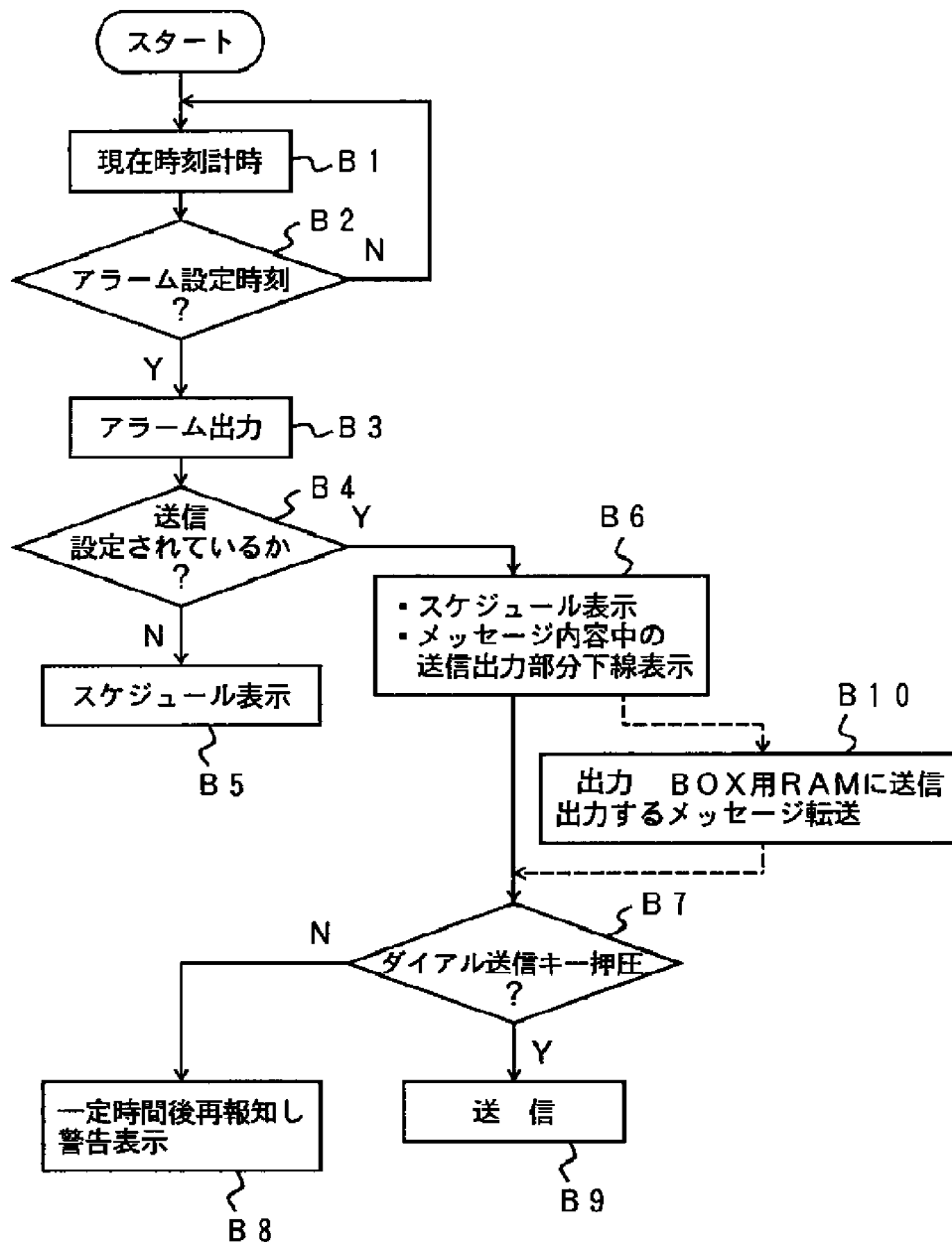
[Drawing 16]



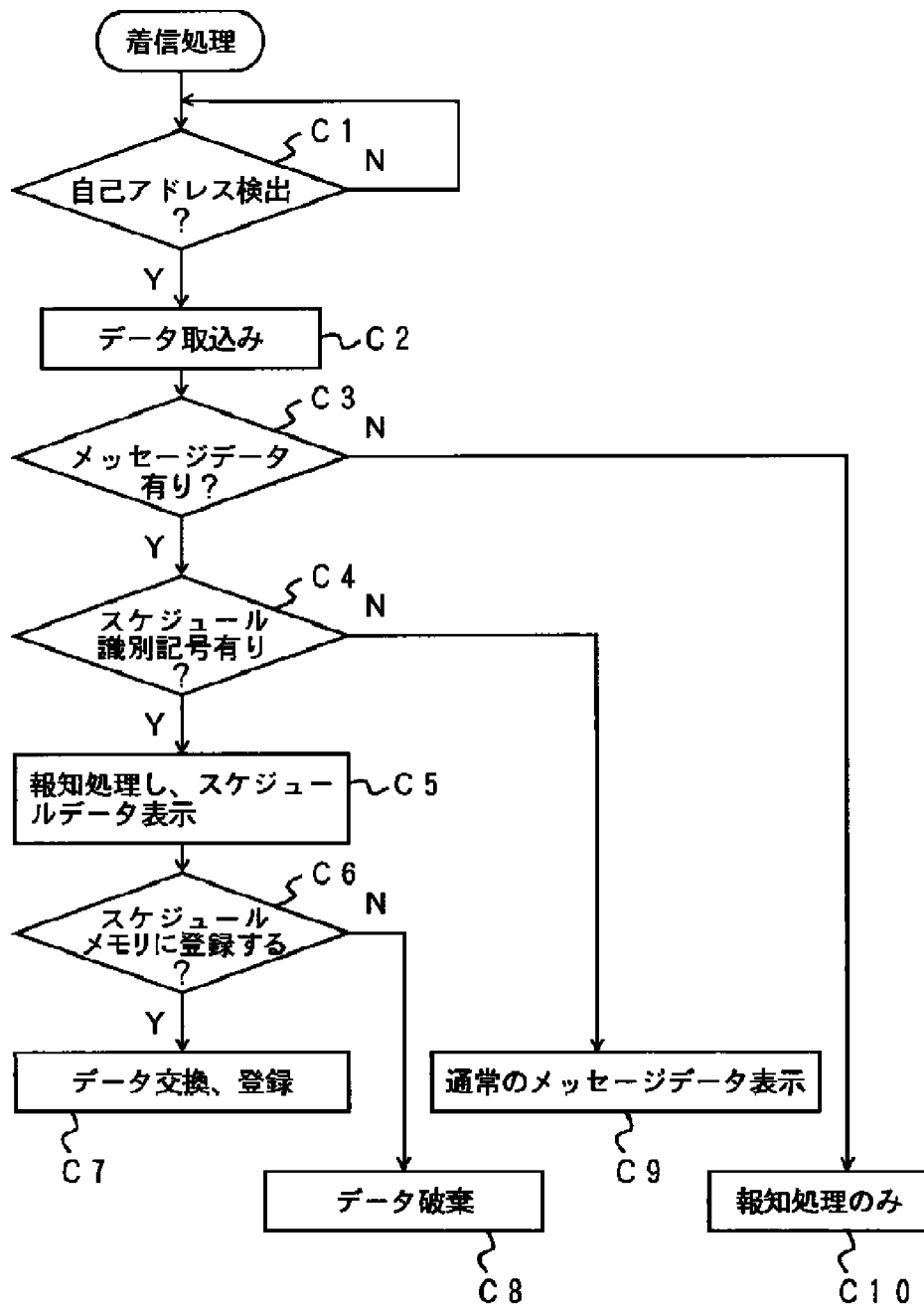
[Drawing 17]



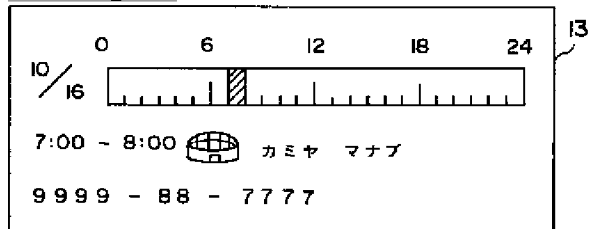
[Drawing 18]



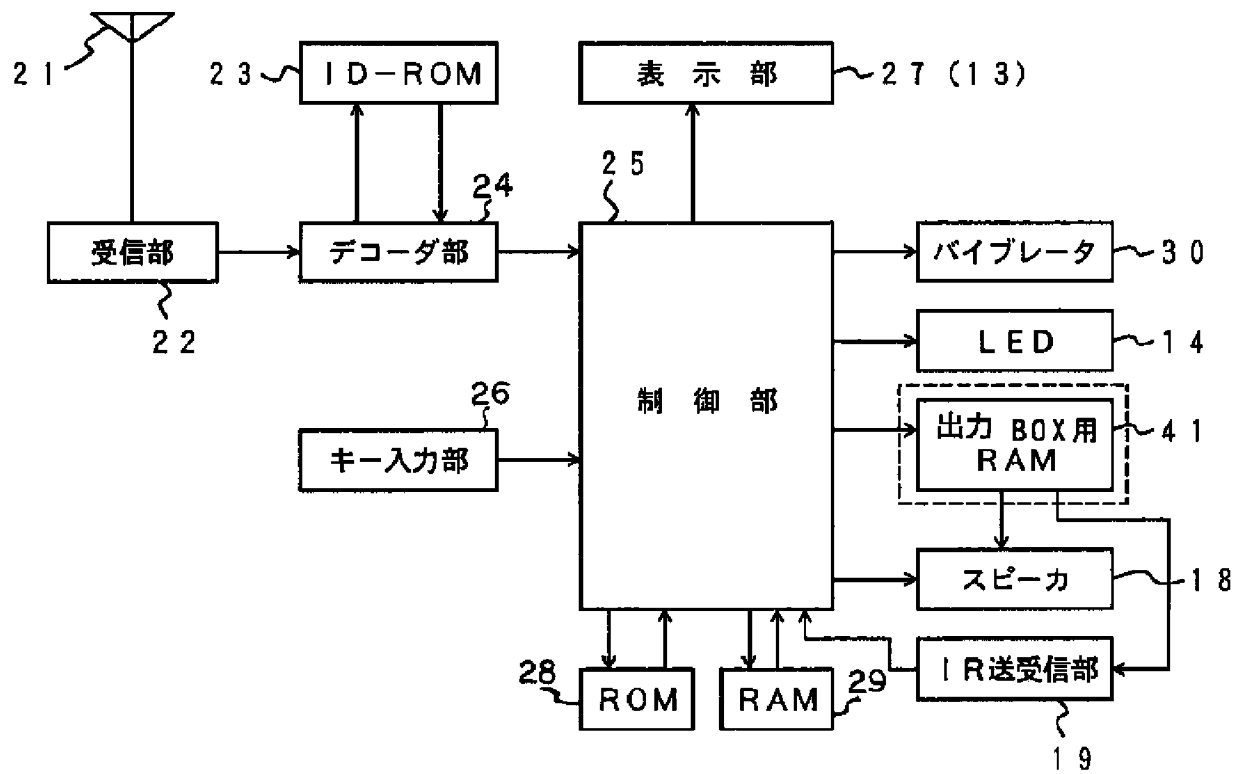
[Drawing 19]



[Drawing 20]



[Drawing 21]



[Translation done.]